



PV Industry Alert

July 2014 – Issue 14

New Connection Standard released

The joint Ergon Energy/Energex *Connection Standard for Small Scale Parallel Inverter Energy Systems up to 30kVA* (the Connection Standard) has been finalised and industry feedback has been incorporated. The Standard was well received by the Inverter Energy System (IES) industry and builds a strong platform to create ongoing value for Ergon Energy, its customers and the IES industry.

Key elements of the new standard

The new standard:

- outlines the technical requirements for connections of grid-connected IES up to and including 30kVA
- applies to all energy sources including solar PV, wind, and fuel cells
- includes guidelines for Battery Energy Storage Systems (BESS)
- provides for IES, including solar PV that do not export power to the grid
- introduces provision for exporting inverters to set a power factor to manage local voltage issues.

[The new Connection Standard is now available on our website.](#)

Our response to industry feedback

- Reactive power control on inverters rated greater than 2kVA is highly recommended rather than mandatory. It will become mandatory from 1 January 2015
- The maximum charge rate for Battery Energy Storage Systems (BESSs) of 3.6kVA will only apply to Tariff 11, not controlled tariffs

- Application can now be made for a BESS to export, however, it will undergo full technical assessment in line with generator IES
- More details are included regarding micro inverters requirements
- There are also more details on connection of IES to Ergon Energy's isolated networks.

Additionally:

- We are retaining the 2-stage V_{max} for connections to the network at 255V
- For now, the assessment thresholds will remain as follows:
 - 5kVA and greater on the main grid
 - Greater than 2kVA on the Single Wire Earth Return networks
 - **All** applications for IES connections to the isolated networks will be assessed.

In the near future will lower the technical assessment threshold on the main grid, and will use preliminary transformer checks to capture smaller applications for assessment based on network risk. The bottom line is that Ergon Energy reserves the right to assess any application.

While there will be no fee for technical assessments in the short term, it is our intention to introduce an assessment fee in future to extend our assessment offering to provide greater confidence that IES will operate effectively. We will provide clear communication on this fee to industry and customers ahead of its introduction.

Feedback and technical advice

If you have any feedback on the Connection Standard or have questions arising from it or any other technical aspect of Ergon's connection process, please email IES.Tech.Enquiries@ergon.com.au

For general information and enquiries, as well as any related to applications and connections, please continue to liaise with the Solar Support Team via the contacts below.

Benefits of reactive power control

Enabling Reactive Power Control (RPC) whenever possible is in the best interests of the PV industry and the vast majority of PV owners. While we are not making it mandatory in 2014, having more inverters connected with RPC enabled will reduce upward pressure on inverter and network voltages. This has two key benefits to the PV industry:

1. Ergon Energy will be able to approve more applications on each network.
2. Inverters will operate for longer before tripping off, or may not trip off at all.

There are also voltage benefits to the network and because of this lower impact, there could be less IES-driven network upgrades required.

Supporting the Connection Standard

Ergon has produced a document to support the new Connection Standard:

Thinking about solar PV? Make the right decisions

This document is for customers considering PV or other IES purchases and provides guidance on applying for an IES, a brief explanation of the Queensland Solar Bonus Scheme, the difference between kVA and kW, non-export systems and reactive power control.

Ergon Energy encourages prospective IES owners to read this document and we encourage sales consultants to provide their customers with a link to the PDF on Ergon Energy's website (see below), or

print it and provide a copy to customers. The information supports the industry's objectives in a number of ways, especially in terms of explaining the benefits of reactive power control and the need to upgrade some customer electrical installations. The [Customer Information document](#) is available on [our website](#).

IES confirmations on the Form A

Ergon Energy has introduced seven new confirmations for IES systems only into the Form A. These act as a reminder to the accredited person of the most frequently overlooked IES-related requirements and provide information to Ergon Energy for our records of the IES settings.

The requirements are:

- The maximum voltage trip point has been set to Ergon Energy's requirements.
- The IES has been tested and deemed electrically safe to be re-energised by Ergon Energy for compliance testing.
- All required meter isolation links and installed and meter board hinged as per QECMM requirements.

And where applicable:

- Inverter capacity >5kVA has been spread over multiple phases, and capacity difference per phase doesn't exceed 5kVA.
- The inverter has been set **not** to export to the grid.
- If reactive power control has been enabled and if so, what setting has been used
- Battery has been configured **not** to export to the grid.

The Form A is only deemed complete if all confirmations are ticked, either 'Yes' or 'N/A', for an IES installation. This final requirement is designed as a prompt to the accredited person to ensure their installation is compliant on every aspect.

The IES confirmations should simply be left blank for non-IES-related uses of the Form A.

Ergon Energy will be performing random checks to ensure non-exporting systems do not supply power to the network. Investigations will be triggered if bi-directional meters indicate that any export has taken place.

New application and agreement forms

Ergon Energy has updated the application form for network connection of IES up to 30kVA. Customers and installers are encouraged to [submit applications on-line](#).

[A hard-copy application form](#) is also available on [our website](#).

As well as other minor amendments, the major changes to the application form include provision to apply for:

- Non-export systems
- Reactive power controlled inverters
- Micro inverters
- Upgraded systems (with more clarity than previously included)

Ergon Energy **no longer requires the customer to return signed agreement forms**. This brings the hard copy process into line with the online application form.

However, it is explicit in the third party authorisation that a sales consultant or accredited person must advise the customer if they assign this authorisation to their company.

If such an undertaking is made and later found not to be the case, Ergon Energy may initiate actions against the third party. We have removed this requirement to reduce the hurdles to an application being made.

The IES Network Agreement has also been enhanced. Ergon Energy has removed the need for customers to counter-sign two agreements and return one to Ergon Energy.

From 1 July, 2014, the customer is deemed to have received the agreement on the basis of it being mailed to the electricity account billing address.

The terms and conditions of the agreement are deemed to commence from the date of installation. The agreement will also specify if the system has been approved as export or non-export, and what, if any, reactive power control setting has been approved.

The terms and conditions, and the Technical Schedule, have been updated in line with the Connection Standard.